

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number 039035/267930

(filed with the Notice of Appeal)

Application Number 10/762,789

Filed January 22, 2004

First Named Inventor Douglas G. Anderson

Art Unit 2814

Examiner Abul Kalam

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

Respectfully submitted,



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UNITED STATES PATENT & TRADEMARK OFFICE ON September 20, 2007

Attachment
Reasons for Requesting Pre-Appeal Brief Request for Review

Following a prior restriction requirement and a subsequent election, Claims 11-13 have been withdrawn as being non-elected and Claims 1-10 have been substantively examined. Of these, Claims 1-3, 6, 7 and 9 under 35 U.S.C. § 102(b) are rejected as being anticipated by U.S. Patent No. 6,263,941 to Michael A. Bryan, et al. Further, Claims 4 and 8 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bryan '941 patent. Finally, Claims 5 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Bryan '941 patent in view of U.S. Patent No. 5,152,857 to Tatsuo Ito, et al. As described in detail below, neither of the references, taken either individually or in combination, teaches or suggests the intermediate wafer assembly of the claimed invention.

Independent Claims 1 and 6 are directed to an intermediate wafer assembly having a handle wafer and a bonded wafer attached to the handle wafer. The bonded wafer includes a first major surface facing away from the handle wafer and a second major surface facing toward the handle wafer. Independent Claims 1 and 6 also define the bonded wafer to include "an angled edge segment adjacent the first major surface that extends linearly at a predefined angle relative to a reference plane defined by the first major surface" and a curved or radiused edge segment extending continuously from the angled edge segment to the second major surface of the bonded wafer. By way of example, Figure 3 is reproduced below from the present application to illustrate one embodiment of an intermediate wafer assembly having a bonded wafer that includes an angled edge segment 40 extending linearly at a predefined angle α relative to a reference plane 34a defined by the first major surface 34, and a curved or radiused edge segment 42 extending continuously from the angled edge segment 40 to the second major surface 34 of the bonded wafer.

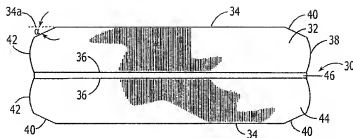


FIG. 3

By including an angled edge segment, the intermediate wafer assembly may be more readily handled by an automated wafer handling system. For example, the intermediate wafer assembly may be more readily grasped or engaged by a chuck or other holding device.

The Official Action alleges that the Bryan '941 patent discloses an angled edge segment adjacent a first major surface. In this regard, the Official Action included an annotated version of Figure 1A from the Bryan '941 patent. The same annotated version of Figure 1A of the Bryan '941 patent that appeared on page 3 of the Official Action is reproduced below for purposes of reference:

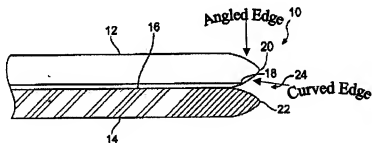


FIG. 1A

As will be noted from the annotated version of Figure 1A reproduced above, the edge segment that is considered by the Official Action to correlate to the angled edge segment of independent Claims 1 and 6 is not, in fact, an angled edge segment, but is a curved edge segment. Indeed, the edge segment that is designated by the Official Action to correlate to the angled edge segment appears in Figure 1A to be the mirror image of the other edge segment that is designated as a curved edge segment by the Official Action. It is also noted that independent Claims 1 and 11 define the angled edge segment

to extend linearly at a predefined angle relative to a reference plane defined by the first major surface. See, for example, Figure 3 of the present application that is reproduced above in which the predefined angle is designated as α . In contrast, the edge segment designated by the Official Action to correlate to the angled edge segment does not extend linearly, but is, instead, curved, thereby extending, not at a predefined angle, but at a range of angles relative to the reference plane defined by the first major surface.

In response to the foregoing arguments, the Advisory Action states that “Bryan discloses in the specification, in column 3, lines 42-44, that the wafer 12 has a finished edge 20 in the approximate shape of a truncated cone with rounded corners. Thus, it is implicit that the perpendicular edge 20 of the wafer 12 has an angled edge segment adjacent the first major surface (top surface of 12) of the bonded wafer.”

By including rounded corners, the edge 20 of the Bryan ‘941 patent is not an angled edge segment that extends linearly relative to the first major surface as set forth by independent Claims 1 and 12. Instead, the edge 20 of the Bryan ‘941 patent is either curved as shown above in Figure 1B or at least includes curved portions and, as such, does not extend linearly as set forth by independent Claims 1 and 6. Even if an argument is made that the portion of the edge 20 that extends between the rounded corners is linear, the resulting edge would not be an angled edge segment as set forth by independent Claims 1 and 6 since the angled edge segment of independent Claims 1 and 6 extends linearly from the first major surface to the curved or radiused edge segment. Indeed, independent Claims 1 and 6 describe the angled edge segment to be adjacent the first major surface (at one end of the angled edge segment) and also describe the curved or radiused edge segment to extend continuously from the angled edge segment (at the other end of the angled edge segment). Accordingly, under no reasonable interpretation does the Bryan ‘941 patent teach or suggest the intermediate wafer assembly of independent Claims 1 and 6.

Not only does the Bryan ‘941 patent fail to teach or suggest an intermediate wafer assembly having a bonded wafer with an angled edge segment, but the Ito ‘857 patent also fails to teach or suggest an intermediate wafer assembly having a handle wafer and a bonded wafer with an angled edge segment as set forth by independent Claims 1 and 6 and, indeed, the Ito ‘857 patent was not cited for this proposition. Based upon the

foregoing, it is submitted that neither the Bryan '941 patent nor the Ito '857 patent nor any combination thereof teaches or suggest the intermediate wafer assembly of independent Claims 1 and 6.

Claims 2-5 and 7-10 depend either directly or indirectly from a respective one of independent Claims 1 and 6, and as such, include all the recitations of their respective independent claims. The dependent Claims 2-5 and 7-10 are therefore patentably distinct from the Bryan '941 patent and the Ito '857 patent, taken either individually or in combination, for at least the same reasons as given above for independent Claims 1 and 6.

Accordingly, for all the reasons stated above, Applicant respectfully submits that the rejections of Claims 1-10 should be reversed.